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**PATENT ABSTRACTS OF JAPAN**(21) Application number: **2001139502**(51) Intl. Cl.: **H01M 8/04 G01R 31/36**(22) Application date: **10.05.01**

(30) Priority:	(71) Applicant: <b>MITSUBISHI HEAVY IN</b>
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**(54) CELL VOLTAGE  
JUDGING UNIT**

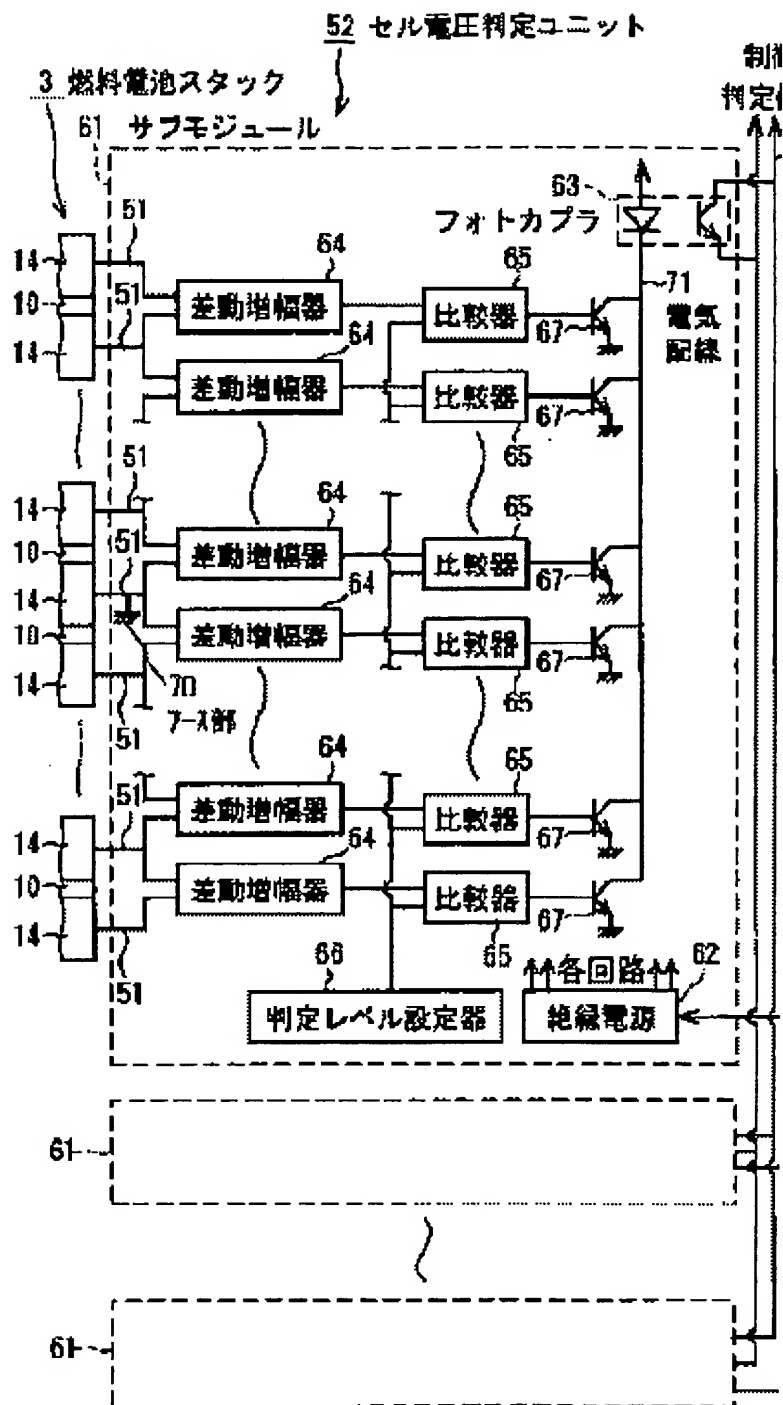
(57) Abstract:

**PROBLEM TO BE SOLVED:** To provide a cell voltage judging unit which can judge the cell voltage of a fuel cell stack disusing complicated and expensive insulation amplifier, and without wiring many electric cables extending over long distance.

**SOLUTION:** The voltage of respective cells of a fuel cell stack 3 are judged at every sub module 61 divided into a plurality. An insulation power source 62 and a photocoupler 63 are installed to each sub-module 61, and respective sub-modules are insulated from each other. At each sub-module, the cell voltage is measured by a differential amplifier 64, and the cell voltage and a voltage judging level are compared by a comparator 65, and a central voltage judging signal is outputted to the photocoupler 63 through an output transistor with wired OR connection. The output side of the photocoupler is

also connected with wired OR connection. A cell voltage judging unit 52 is located directly to or near to the fuel cell stack.

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